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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,426	11/20/2001	Chun-Pu Hsu	MR2349-730	8566

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ROSENBERG, KLEIN & LEE
3458 ELLICOTT CENTER DRIVE-SUITE 101
ELLICOTT CITY, MD 21043

EXAMINER

NGUYEN, TRAN N

ART UNIT PAPER NUMBER

2834

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,426

Applicant(s)

HSU, CHUN-PU

Examiner

Tran N. Nguyen

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: .

DETAILED ACTION

Drawing

The drawings are objected to under 37 CFR 1.83(a) because they fail to show *the width of the inner dent of the concave end being larger than the mount of the concave end, as in claim 4, show the width of the inner dent of the concave end being smaller than or equal to the mount of the concave end, as in claim 5*, and as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 4-5, “each stator is separated into a plurality of equal units” is indefinite because claim 1 recites a stator structure with a stator ring and a plurality of stator teeth. Therefore, the so-called “each stator” is unclear. In light of the spec., the term “each stator” is understood that *said stator structure is separated into a plurality of equal units, each unit having a segment of the stator ring and a number of stator teeth*”

In claim 1, “coil wrapped by a winding tool or a winding formation tool” the method of forming the device is not germane to the issue of patentability of the device itself. (*In re Thorpe*, 227 USPQ 964, 966.)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forbes et al (US4712035) in view of Nitta et al (US 6265804) and Wendt et al (US4131693).

Forbes discloses an inner stator structure having a stator ring (35) and a plurality of stator teeth, each of the stator teeth having an insulating stage (figs 1-10). Forbes substantially discloses the claimed invention, except for the following limitations:

(a) the ring is divided into a plurality of equal units, each unit having a concave end and a convex end for assembling adjacent units into an annulus shape, and wherein the stator structure is separated into a plurality of equal units, each unit having a segment of the stator ring and a number of stator teeth with the width of the inner dent of the concave end being larger than the mount of the concave end, as in claim 4, show the width of the inner dent of the concave end being smaller than or equal to the mount of the concave end, as in claim 5;

(b) the winding is made of lacquered copper wires.

Regarding the limitations listed in subsection (a), Nitta teaches a motor with a stator ring (7) divided into a plurality of equal units, wherein each unit having a concave end and a convex end, i.e., dovetail connecting ends, for assembling adjacent stator units together. The Nitta's the stator structure is separated into a plurality of equal units, each unit having a segment of the stator ring and a number of stator teeth. Nitta teaches that the configuration of the stator separated units would reduce the iron loss since the stator ring is divided so that amounts of magnetic flux passing through the adjacent portions become the same.

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Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the Forbes' motor by embodying the stator structure configuration as taught by Nitta. Doing so would enable the reduction of the iron loss therein.

Regarding the inner dent of the concave end being larger than the mount of the concave end, as in claim 4; Alternately, the width of the inner dent of the concave end being smaller than or equal to the mount of the concave end, as in claim 5, Nitta teaches the stator segments having dovetail connecting ends function as fastening means to assemble the adjacent stator units together. Those skilled in the art would realize that it would have been obvious to an artisan to modify the size and shape of the convex end and the concave end as the Nitta's teaching of providing a convex end and a concave end to assemble adjacent stator units together. Doing so would only require level of mechanical skills in the art. A change in size or shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955) (emphasis added).

Regarding the limitations listed in subsection (c), Wendt teaches that electrically insulated lacquered wire is widely used in the fields of electronics and telecommunication as well as in electric motors and transformers. This wire is formed with generally a copper (or aluminum) conductor surrounded by a thin but very elastic and heat resistant coat of synthetic resin.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the Forbes' motor by embodying the stator with lacquered copper wires as the stator winding, as taught by Wendt, because lacquered copper wires are widely used in the art.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable Forbes, Nitta and Wendt, as applied in the rejection against the base claim, and further in view of Schutek et al (US 6107718).

The combination of **Forbes, Nitta and Wendt** refs substantially discloses the claimed invention, except for the added limitations that the stator structure is an outer stator.

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Schustek, however, teaches an electric machine with an outer stator structure. Those skilled in the art would realize that outer stator or inner stator is a reversal arrangement of one another. Motors or generators with outer stators are well known in the art.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the prior-art motor by configuring the stator as an outer stator, i.e., reversibly configuring the prior-art inner stator into an outer stator because motors or generators with outer stators are well known in the art. Doing so would require ordinary because it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. This rearranging part of an invention involves only routine skill in the art (*In re Japikse*, 86 USPQ 70) since one of ordinary skill in the art would have necessary mechanical skill to make simple **reversals of positions of mechanical parts** without an express teaching in a reference (*In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969)).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable Forbes, Nitta and Wendt, as applied in the rejection against the base claim, and further in view of Nagasaki et al (US 6127760).

The combination of **Forbes, Nitta and Wendt** refs substantially discloses the claimed invention, except for the added limitations as recited in claim 7.

Nagasaki, however, teaches a stator having closing rings on both top and bottom sides thereof, and having connecting end that integrally connecting the closing rings (fig 5-6).

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the prior-art motor by embodying the closing rings on both top and bottom sides thereof, and having connecting end that integrally connecting the closing rings, as taught by Nagasaki et al. Doing so would provide support for the stator structure.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable Forbes, Nitta and Wendt, as applied in the rejection against the base claim, and further in view of levels of ordinary skilled in the art.

The combination of **Forbes, Nitta and Wendt** refs substantially discloses the claimed invention, except for the added limitations that the winding is the induced winding of a generator.

Those skilled in the art would realize that the motor having magnetic field interact between the magnetic exciting winding of the stator and the rotor's magnet/electromagnet in order to convert electrical energy into mechanical energy. Vice versa, the generator having magnetic field interact between the induced winding of the stator and the rotor's magnet/electromagnet in order to convert mechanical energy into electrical energy.

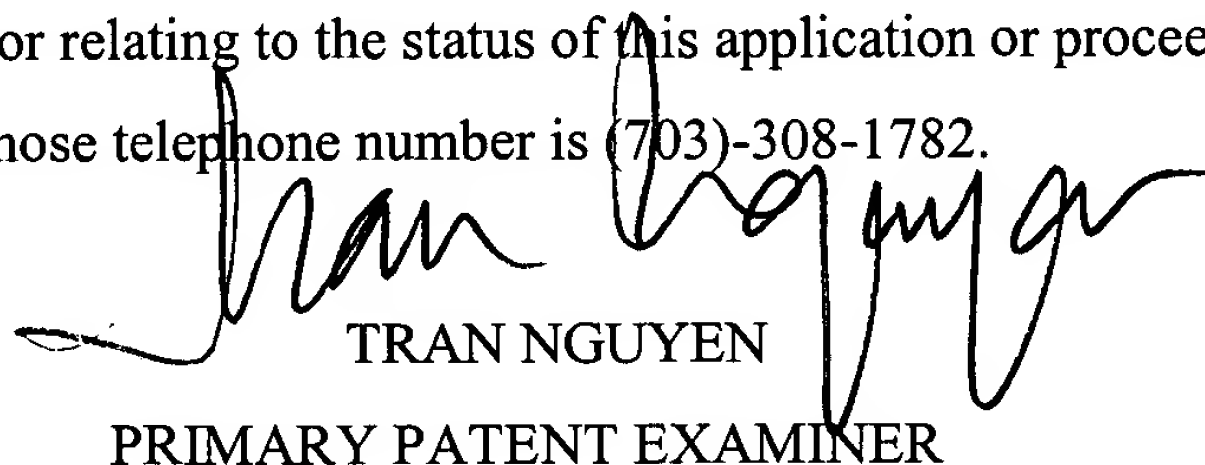
Thus, Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the prior art motor to operate as a generator with induced winding, as claimed, because this is a matter of industrial application of the dynamoelectric machine.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N Nguyen whose telephone number is (703) 308-1639. The examiner can normally be reached on M-F 6:00AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)-395-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.



TRAN NGUYEN
PRIMARY PATENT EXAMINER

TC-2800